

NED National Endoscopy
Database

**National Endoscopy Database (NED)
Validation process and compliance
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Part of the JAG programme at the RCP

JAG Joint Advisory Group
on GI Endoscopy



**Royal College
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1. Introduction

This document summarises the validation process for the National Endoscopy Database (NED) and explains how endoscopy reporting software can be awarded NED-compliant status, and hence how an endoscopy service can meet the GRS standards and become JAG accredited. This document is primarily designed for endoscopy reporting system suppliers, but may also serve as a useful reference for endoscopy services.

The original validation process was based on the first iteration of the NED schema (NEDi1), launched in 2014. The details of iteration (NEDi2) were finalised and made available in March 2020. This document summarises the validation process for NEDi2, and provides a framework for the transfer of reporting systems from NEDi1 to NEDi2 (see appendix 4). This document also covers rolling data quality minimum standards to maintain NED compliance.

This document supercedes previous versions of the validation plan.

2. NED validation process summary

For endoscopy software to become NED-compliant, the following validation stages must be completed successfully. Both new endoscopy reporting software and software upgrades* of established systems must commence the validation process at stage 1 (below). Each software version must meet the requisite standards. Suppliers are responsible for ensuring that all software versions have been appropriately tested.

** Minor software upgrades should be discussed with the NED team, who may permit omission of stage 1.*

Historically, there have been 3 NED databases: the test version, pilot version and live version. The test version is used by suppliers only. Pilot and live versions are identical in terms of functionality, the only difference being that the pilot version does not link with JETS (JAG Endoscopy Training System). There has been an additional step of NED-JETS validation required to transition from the pilot version to the live version of NED. From NEDi2, the NED-JETS validation step will be mandated within the initial validation process. This means that the use of the pilot version of NED as a validation stage will become superfluous. Therefore, the pilot database will be withdrawn* with the implementation of NEDi2, and all patient data from NED-compliant software will be uploaded to the live version of NED.

** Note: in order to provide endoscopy services with historical KPI comparators, for a brief time procedure data will be added into both the NED-pilot and NED-live databases*

The table below provides a summary of the key validation stages. For full details of the validation process, please see appendix 1.

Stage	Description	Further information	Version of NED
Stage 1	In-house testing of ERS version by ERS company	To validate that the software version accurately uploads data to NED, suppliers complete a data-mapping exercise then test if their software can accurately upload a series of test procedures to the test version of NED. To pass this stage, the JAG will confirm that all mandatory fields are populated correctly.	Test
Stage 2	Testing NED at a single endoscopy service	To validate that the software version accurately uploads patient data to NED using live hospital data, the supplier must test the software at a single endoscopy site. This involves live endoscopy procedures being uploaded into the live NED database. The software must achieve ALL NED-COMPLIANCE MINIMUM STANDARDS, including JETS trainee data validation, over 2 months before NED-COMPLIANCE will be granted – only then (when advised by the NED committee) can the software version be rolled out to other endoscopy sites.	Live
Stage 3	Ongoing assessment of NED compliance	NED data is subject to ongoing quality assurance. Data being uploaded to NED is reviewed each quarter by the NED team. After review, each software version is awarded a status to reflect its compliance with NED.	Live

3. NED compliance

NED compliance is the term that JAG uses to indicate whether a software version is sending accurate data to NED.

After in-house testing (stage 1) and single endoscopy site testing (stage 2) has been completed and NED-compliant status has been conferred to a software version by the NED committee, data on NED is subject to ongoing quality assurance. Data being uploaded to NED is reviewed every 3 months by the NED team. After quarterly review, each software version is awarded a status to reflect its compliance with NED. This NED status is published on the NED website - <https://ned.jets.nhs.uk/KPI/Default.aspx?ContentId=Suppliers> .

The 3 NED statuses are shown below:

Status	Description
Compliant – live NED site	Software version has completed initial data validation stages 1 and 2, has been awarded NED-Compliant status and continues to meet ALL NED-COMPLIANCE MINIMUM STANDARDS
Compliant but under review	Software version has completed initial data validation steps, has been awarded NED-Compliant status but has not met one or more NED-COMPLIANCE MINIMUM STANDARDS over the past 3 months. The software version must achieve the minimum standard for that measure over the next 3-month period or NED-compliant status will be withdrawn.
Not compliant	Software version has either not completed initial validation or has not met the ongoing NED-COMPLIANCE MINIMUM STANDARDS and has thus had compliant status withdrawn. In order to regain NED-compliant status, validation must be recommenced from Stage 1. New software versions must meet ALL NED-COMPLIANCE MINIMUM STANDARDS for two consecutive quarters before a NED-Compliant status is achieved.

NED compliance minimum standards

Measure	Description	Minimum standard	Notes
Upload success rate (USR)	The USR is calculated by the percentage of individual procedures (this is not unique procedures as the same procedure can be resubmitted multiple times) successfully uploaded to NED. This does not include procedures rejected for GMC code errors.	≥98%	USR <90% must be rectified within 3 months, not 6 months. In due course, the denominator will include all procedures captured on the local ERS, rather than only procedures that have been submitted to NED.
Correct GMC/NMC number	Percentage of procedures uploaded with a valid GMC/NMC number	≥90%	
Sole procedure indication “other”	Assesses how many procedures have no indication documented apart from “other”	≤10%	

Sole procedure diagnosis "other"	Assesses how many procedures have no diagnosis documented apart from "other"	≤10%	
JETS trainee data accuracy	Assesses accuracy of trainee-specific data capture	As per JETS validation process (appendix 2)	

NED compliance minimum standards are under continual review and may be periodically revised or replaced.

Timeframe

ERS companies will be informed of their status every 3 months. ERS companies will be given 6 months (2 consecutive 3-month periods) to achieve each minimum standard, except where USR is <90%, which must be rectified within 3 months.



Appendix 1. Data validation process

Stage 1 – in house testing by Endoscopy Reporting System supplier

Validation type	Detail	Success criterion	Action/ owner
1.1 Term-mapping	Complete data terms mapping exercise (spreadsheet) - ensure all ERS terms are mapped to NED terms	No orphan terms (i.e. each ERS term must map to a NED term). No inappropriate terms mapped to “other”. Free-text avoided in binary NED fields	ERS company to forward spreadsheet to NED team
1.2 Upload process	Complete manual upload of NED test procedures (available in the resources section of NED website) to the NED Test database	No procedures rejected by NED. Once all procedures have been completed, supplier should confirm this by emailing askjag@rcplondon.ac.uk	ERS company
1.3 ERS/NED data accuracy	Compare data from the manual upload of Test procedures with the NED Test database	All NED data fields in NED populated accurately. To pass this stage, JAG will confirm that all test procedures have been uploaded successfully.	NED team
1.4 Failed upload process	ERS process for handling reports that fail	Appropriate process documented and sent to JAG (as detailed in business message specification document) which includes: <ul style="list-style-type: none"> - mechanism for informing service of error/ issue - process for ensuring the required action is taken - mechanism for ensuring the corrected report is uploaded 	ERS companies to forward process outline to NED team

Stage 2 – Testing ERS version at a single endoscopy service

To validate that the software accurately uploads data to NED using patient data at a single endoscopy service (this could either be a single hospital or a trust), the supplier must test the upload methodology at a single endoscopy site. This involves live procedures being uploaded into the live NEDi2 database.

Where a supplier has multiple sites, the software must only be tested at a single site and must achieve ALL NED-COMPLIANCE MINIMUM STANDARDS over a 3-month period prior to the NED team permitting roll-out to other endoscopy sites.

Validation type	Detail	Success criterion	Action/ owner
2.1 Upload process – single endoscopy site	Robust upload of endoscopy procedures to the Live NEDi2 database from a single endoscopy site.	ALL NED-COMPLIANCE MINIMUM STANDARDS met over a 3-month period	NED team
2.2 NED/JETS validation	See appendix 2	Meets requirements	NED team
On successful completion, the software version shall be awarded NED-compliant status by the NED team. Once NED team have confirmed this, supplier can move to stage 3. To do this, a supplier needs to contact askjag@rcplondon.ac.uk to request a new NEDi2 API key. All endoscopy sites using that software version can commence uploading to NED live database.			

Stage 3 – ongoing assessment of NED compliance

Validation type	Detail	Success criterion	Action/ owner
3.1 Ongoing assessment of NED compliance	To ensure software is consistently meeting the required standards, the data from each software version is checked every 3 months*	ALL NED-COMPLIANCE MINIMUM STANDARDS met over a 3-month period (with exception of new software additions which require 6-months)	NED team

*ERS companies will be informed of their status every 3 months. ERS companies will be given 6 months (2 consecutive 3-month periods) to achieve each minimum standard, except where USR is <90%, which must be rectified within 3 months.

Appendix 2. Trainee data validation process

Below outlines the process for validating data from NED to allow it to be uploaded into JETS.

1. Identify appropriate pilot site

Pilot site must:

- Be an NHS acute hospital site
- Have a minimum of 3 active trainees and multiple trainers
- Agree to supporting JETS validation process

If the above standards cannot be met, pilot site must be agreed with NED committee prior to piloting.

2. Confirm contacts at site

Suppliers should provide JAG with contacts necessary to undertake validation; this must include Service lead, Training lead and software administrator.

3. Validation steps

Procedures must be uploaded using software version used to complete test procedures. As procedures are uploaded to NED, trainees will review the data uploaded and confirm it is accurate (via JETS website). Trainees can edit procedures that have been uploaded. If they have procedures that are not uploaded or there are issues raised, these should be investigated and resolved as they arise by the supplier.

The training lead at the pilot service will be sent a summary of uploaded procedures including a summary of any changes made to procedures. The process will be overseen by JAG. A minimum number of 50 trainee procedures in total must be uploaded in 3 months (we expect numbers will be significantly higher than this).

JAG will assess whether software is accurately uploading trainee data based on:

- Data must be uploading accurately – there should be a minimal number of procedures edited by trainees
- Issue resolution - any issues raised during piloting should be resolved
- Feedback actioned – appropriate issues raised by trainees should be addressed

4. Feedback to suppliers

The outcomes from the validation process will be provided to ERS leads with any actions or discrepancies identified. If validation process highlights major issues (such as those which impact on trainee KPIs) that need attention – ERS will have to repeat the 3-month validation process.



5. Sign off

If supplier and software passes validation steps then this will be confirmed by JAG. If sign off not achieved following a review of validation, repeat validation occurs.

Appendix 3 - Interim measures during NEDi2 roll-out

- The NEDi2 dataset was finalised and shared in March 2020. From 1 April 2020 all new ERS and new ERS versions need to comply with the validation processes outlined in this document.
- ERS companies that have ERS versions that are currently uploading to the Pilot-NED database (i.e. currently hold “Compliant – NED pilot only” status) are informed that this status will be withdrawn as part of NEDi2 roll-out, from 1 January 2022. Thus, these software versions need to successfully complete the stage 2 validation step 2.2 (NED/JETS validation) prior to that time so that they can be awarded full NED-compliant status. Software versions that have not achieved this by that time will be deemed NED non-compliant systems.
- ERS companies that have ERS versions that are currently uploading to the Live-NED database (i.e. currently hold “Compliant – Live NED site” status) are informed that from 1 January 2022, NED-compliance status will be only be awarded/retained for ERS versions that are NEDi2 compliant. Software versions that have not achieved this by that time will be deemed NED non-compliant systems.